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¶ Governor Cox in Message to Assembly Recommends Reform of Local Health Organization—Wood Dust as an Industrial Health Hazard—Sanitary Conveniences for Cities—New List of Publications of State Department of Health—Influenza Deaths in Ohio S. A. T. C. Units

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The Ohio Public Health Journal

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EDITORIALS

Health Reorganization Problem Is Now Before Legislators

Another step toward the reform of Ohio's local health organization was taken when Governor Cox in his inaugural message to the General Assembly outlined the situation and pointed out the local conditions which must be remedied before the State Department of Health can function properly.

The Governor, like every one else who has commented upon the situation, did not need to argue the case. The facts speak for themselves: a system in which the State health authority must act through more than two thousand independent local districts, presided over by health officers who frequently draw salaries of five or ten or twenty-five dollars a year and possess no qualifications for their positions, can not be expected to give anything approaching adequate protection to a population of five million.

It is this wasteful, inefficient system which, the Governor recommends, the Legislature should sweep away and replace by a system in which competent men, working in co-ordination with each other and with the State Department of Health, can really protect and promote public health in Ohio.

We believe that the members of the Legislature, holding fresh in memory the importance which the late war showed to be attached to public health work, are in a frame of mind to act promptly and decisively on this question. The case rests with them, and it will be for them to select from among the many suggestions which have been made those which seem best adapted to the purpose before them — the provision of a sound, efficient public health organization for the State.

* * *

Silver Lining Is Beginning to Shine Through Clouds

The influenza situation has at last assumed a more encouraging aspect. As this is written, epidemic conditions appear to be definitely at an end, the existing cases merely being indicative, it is believed, of the prevalence which may be expected to continue through the remainder of the winter and into the spring.

These residual cases, it must be recognized, are far more numerous than influenza cases are in normal winters. The situation, however, is so widely different from that which existed during October, November and December that it should offer no great problems of control. Practically all outstanding centers of infection in the State have returned to conditions approaching the normal and the problem of fighting outbreaks so widespread as to paralyze entire communities no longer exists.

The relaxation of the strain upon the health officer does not imply that the individual can afford to relax his personal vigilance against the attacks of the disease. While the fatality rate is running lower than at the beginning of the outbreak, influenza is still a dangerous disease, especially when the person attacked by it fails to receive the best possible care. While the disease is far less prevalent than formerly, there are still many opportunities for exposure, many of which can be avoided by a little care.

The person who has had influenza also needs to exercise caution. Avoidance of unnecessary exertion of a violent nature, due attention to diet and the obtaining of sufficient sleep are essentials to a successful convalescence and recovery. Every influenza victim should have his lungs examined by a competent physician a short time after recovery, in order that any impairment brought about by the disease may be detected at once and treated before it becomes serious.

All in all, the situation is a delicate and dangerous one. A seemingly unimportant cause may produce disastrous results, either to the public or to the individual. Therefore neither the public nor the individual can afford to be careless.

* * *

Some Estimates of Influenza Mortality in State and Nation

Twenty-two thousand is the estimated influenza death total in Ohio for the months of October, November and December. This estimate is furnished by the State Bureau of Vital Statistics, and while based upon incomplete returns for the two latter months is believed to be approximately correct.

Tabulations for October show a mortality of approximately nine thousand in that month. November and December, for which reports are incomplete as this is written, showed a gradually declining rate which is expected to produce a total in the neighborhood of thirteen thousand for these months.

In the entire United States four hundred thousand or more deaths due to the epidemic occurred during September, October and November,

according to the estimate made by the American Public Health Association's subcommittee on the history and statistics of the epidemic. An estimate by Edgar Sydenstricker, statistician of the United States Public Health Service, which "is confessedly rough and intentionally is made conservative," places the probable total for the same period between three hundred thousand and three hundred and fifty thousand. It is probably safe to say that up to January 1 the epidemic had caused a half-million deaths in this country.

In proportion to population, therefore, Ohio appears to have fared just about as badly as have other sections of the country: with about five percent of the population of the United States within her borders, the State has had slightly under five percent of the country's deaths. The death total in the State will be increased during an indefinite number of months to come, but if conditions continue as they now are the fatality rate will not approach that of the early period of the outbreak.

* * *

Full Compliance With Regulations Expected of Physicians

Cards for reporting cases of venereal disease and literature for distribution to venereal disease patients have been mailed by the State Department of Health to all Ohio physicians named in the latest available list. These supplies are for use by the doctors in complying with the venereal disease regulations, a copy of which was also sent.

While legal means of forcing obedience to the regulations are provided in the form of penalties for violations, it is the hope of the Department that such means will not often have to be employed. It is hoped that a realization of the great responsibility placed upon them by the venereal disease regulations will lead Ohio physicians to take this phase of their duty to the public most seriously. They are being called into service in the greatest movement now under way for the advancement of the American people. The State Department of Health, remembering their war record, expects to find very few slackers among Ohio physicians in this new fight.

The venereal disease regulations have been in effect since July 1, but delays in obtaining certain needed supplies of printed matter prevented the general distribution of forms and circulars until recently. A certain amount of increase in the number of venereal cases reported has occurred since that time, but enormous gains must still be made before Ohio's reporting record can be considered nearly complete.

The Department feels, with the doctors all informed of their duties, that it is now thoroughly organized for an effective fight against venereal diseases in Ohio. The number of venereal clinics is steadily growing, educational work is progressing and other activities are continuing. Contact with cases is an important first step, and this can be achieved only with the assistance of the physicians.

Every time a doctor reports a case or hands a patient a circular he should feel that he is by that act enlisting in a great public health force, serving under the direction of the State of Ohio and the United States to stamp out venereal diseases in this commonwealth.

* * *

Measles Patients Need Special Protection Against Pneumonia Measles is always a dangerous disease — for proof of which statement readers are referred to the mortality statistics, showing that it caused twenty-five hundred deaths in the five years immediately preceding 1918. In the present period of high influenza and pneumonia prevalence, however, it becomes doubly dangerous, through the greatly increased possibility of the occurrence of pneumonia as a complication.

Pneumonia — usually of the bronchial type — following measles is the direct cause of most deaths attributed to the latter disease. Measles renders its victims extremely susceptible to pneumonia, as was demonsrated in the epidemics in the army training camps last winter. For this reason measles patients should be carefully protected against exposure to pneumonia. They should be kept in bed during the entire period of sickness and should not be permitted to come into contact with visitors, who might be unrecognized carriers of pneumonia infection.

These observations are seen to be especially pertinent at the present time if one turns to the December morbidity statistics presented elsewhere in this magazine. Measles prevalence increased considerably in that month as compared to November, and a situation now exists which demands extreme watchfulness on the part of parents, school authorities, physicians and health officials.

* * *

Smallpox Situation Decidedly Unsafe; Vaccination Advisable Several communities in Ohio continue to report a decidedly unsafe degree of smallpox prevalence. A serious epidemic, under conditions now existing, is likely to break out at any time. To ward off the danger so far as possible, the State Department of Health repeats its previous advice to the people of Ohio: get vaccinated.

Observance of this precaution is the only certain method by which a person can protect himself against smallpox. When certain communities, by laxity in enforcing quarantine, permit the disease to spread, persons in other communities, however faithful their health officials may be, are not safe unless vaccinated. A case brought into the most perfectly health-officered town is certain to come into contact with a number of residents before it is recognized as a source of danger. If these contacts are made with nonvaccinated persons, the seed of a widespread outbreak is planted.

To protect their communities, health officers should preach vaccination and school officials should require vaccination of all pupils. To protect their business interests and their employees, employers should require vaccination as a prerequisite to the hiring of any man. To protect themselves, individuals should be vaccinated.

* * *

Build Sanatoria Now for Tuberculosis Following Influenza

The influenza epidemic has made the need for tuberculosis hospitals greater even than it has been in the past. While no accurate statistics can be quoted from past epidemics, it is reasonably certain that an outbreak of influenza such as the United States has experienced during the last five months increases the prevalence of tuberculosis.

It can safely be predicted now that Ohio will have a decided jump in the tuberculosis death rate in the next two or three years, unless immediate action is taken to fight this threatened danger. Many influenza vicims who in the ordinary course of events would have resisted tuberculosis infection will now, in the weakened condition in which the epidemic has left them, give way to the inroads of the tubercle bacilli; if means of caring for these victims are not at hand when the disease appears, many of them will die.

It is an accepted principle that practically any case of tuberculosis can be cured if treatment is applied soon enough. In many cases the necessary treatment can be given at the patient's home, but in many others home conditions make this impracticable. For persons in the latter class hospitals are needed — hospitals with ample capacity to care for all applicants.

Ohio laws provide a convenient method for establishing public tuberculosis sanatoria — the district hospital plan. Any group of from two to ten counties may organize as a district and establish a hospital, the costs

of construction and maintenance to be met jointly by the counties. A tuberculosis hospital, constructed according to modern ideas of the needs of such institutions, is comparatively inexpensive and can be financed by any district whose people appreciate the value of human life sufficiently to put a few dollars into a project for saving it. The State Department of Health has a division devoted to tuberculosis work, one of whose chief functions is the encouragement of tuberculosis hospital organization. The Department will gladly advise any board of county commissioners whose members feel that their county ought to have a part in this important fight. It will give all possible assistance in organizing a district and in planning and maintaining a hospital.

* * *

Prevent Diphtheria by Immunizing All Babies

A practical method of immunization against diphtheria, distinct from the familiar therapeutic use of antitoxin, has recently been developed, largely through research and experimentation by the New York City department of health, and has been employed with success in New York and elsewhere. Immunization of babies to protect them during their early years — the period of highest susceptibility and highest mortality — is being urged by writers on the subject.

Abraham Zingher of the New York department has outlined a proposed plan for general immunization against diphtheria. He would have all babies below the age of twelve months, or perhaps eighteen months, immunized by the injection at one-week intervals of three successive doses of 10 cc. each of toxin-antitoxin. He favors the application to all older children and to adults of the Schick test — a method of determining a person's susceptibility or immunity to diphtheria, and the immunizing of all found susceptible. Immunization of infants at the age proposed will, it is believed, afford protection to the age of five years.

Despite the reduction in the diphtheria death rate accomplished through the use of antitoxin as a curative agent, the disease remains a leading cause of death among children. The yearly mortality from the disease in the United States is estimated at 23,000. In Ohio diphtheria kills approximately 700 persons each year, the total of deaths during the five years from 1913 to 1917, inclusive, having been 3,879.

Failure, through sheer neglect, to use antitoxin is responsible for some of these many deaths, and others are due to delay in diagnosis of cases of "sore throat" and consequent delay in applying the antitoxin treatment. The development of a reliable method of immunization wipes

out these sources of danger by providing a means of preventing diphtheria.

The children of Ohio will profit if their parents and their physicians investigate, accept and apply this safe method of protecting them against one of their greatest disease enemies.

* * *

New Booklet Tells About Work of Laboratories Issued to inform the physicians of Ohio regarding the free laboratory service offered them by the State Department of Health, a new booklet entitled "Laboratory Service of the Ohio State Department of Health" is just off the press.

The Division of Laboratories of the Department is frequently in receipt of inquiries which indicate that the medical profession of the State is not completely informed as to the work of the Laboratories. It has prepared this booklet to supply the information which seems to be lacking in some places.

Every physician in the State should have a copy. The Division of Laboratories has nothing to sell to the physician. It has, however, a wealth of free services to place at his disposal. The new booklet tells what these free facilities are. Every physician should send for a copy and keep it on his desk where it will be handy for reference use.

Anti-Venereal Campaign Must Not Relax

The end of actual fighting in the world war does not lessen the necessity for the campaign against venereal diseases. Rather, it becomes a greater war measure than ever. Cessation of hostilities centers attention on the return of the victorious American forces. On entering the service the men became subject to Army and Navy discipline, which, in the control of venereal disease within the ranks, is rigid. Prior to demobilization, the tense fighting morale of the forces is bound to relax. The men will be buoyant in spirit and eager to celebrate. When mustered out they will return to conditions in civilian life which have been responsible for venereal disease. Many of them wil contract it as a result. Unless all cases of venereal disease have proper treatment during the period of reconstruction the scourge will reach alarming proportions. The time from now on is the most critical of all.—*Public Health Reports,* United States Public Health Service.

Governor Urges Health Reform in Biennial Message

IN his address to the General Assembly, delivered immediately following his inauguration for a third term January 13, Governor James M. Cox made the following recommendations for reform of the State's local health administrative system:

"There is no need more pressing than a radical reorganization of the health service throughout the State. The present plan under which the State Department of Health operates is highly regarded by competent authorities, but speaking in general terms, it is well-nigh impossible for it to provide the protection and render the co-operation desired for the reason that in a vast majority of communities there is no organization to be called into use.

"Within the last year we have experienced the epidemic of influenza. The death rate was appalling all over the country, and inroads into both the health and the life of the people were so serious that the Federal government recognized the task of scientific resistance as scarcely second in importance to carrying on the great war. Through the surgeon general of the army, call was made on the states for prompt and vigorous cooperation. With the experience at hand, certain standards and precautions were passed down to the states to be communicated to the communities. Under the stress of this great crisis, our State and others as well found practically the same situation. In Ohio we found more than two thousand separate health jurisdictions with no more than a score that could be considered reasonably efficient. In only five cities, Cleveland, Akron, Springfield, Dayton and Cincinnati, were health officers employed full-time. Physicians were pressed beyond their time and capacity to render the service demanded by families and public institutions, so that those serving officially but part time were unable to respond properly to State call. And then when the outbreak was acute outside the municipalities, conditions were even worse. In fact, they were well-nigh unspeakable.

"While not in any wise blaming the body of the medical health officers for this situation, the communities were placed in somewhat the same position as a country would be placed, if its army discovered that it had something else to do when war broke out.

"There are 1,353 townships in the State . Under existing law, the township trustees constitute the board of health, and the township clerk becomes its secretary. The health officers are employed at a salary which will not average much in excess of twenty-five dollars per year. The service is let by competitive bids, and I need not appeal to your imagination in order that you may understand the reasons which in many instances would prevent competent physicians from participating in this competition.

"The sanitary and medical history of the great world war will record a distinct achievement in sanitation, medicine and surgery.

So soon as camps were selected, drainage and sanitation were established along the modern lines which experience had suggested. Substantially all the ills common to camp life in past wars disappeared, and except for the influenza which seems to have been almost world-wide in its prevalence, the loss of life in the camps, notwithstanding the unprecedentedly large groups of men that were assembled together, would have been very much less than the average mortality in private life. I mention this in order to give point to the thought that disease prevention is not only the first, but the most important step in the preservation of the public health.

"No one can deny that science has evolved safeguards which constitute a beneficent contribution to the race, and yet to be availed of in any measure worth while, the State organization must have that character of community assistance which is possible only by an efficiently organized local unit. Legislative action in behalf of this proposal is a most pressing task confronting you. It is mandatory upon local subdivisions of government to make a tax levy suffiicient to pay the interest on its debt. No fault can be found in this but I fancy that we violate no ethics in insisting upon a safeguard in behalf of public health, as well.

"A great many of the cities in this State should be compelled to employ a health officer who will devote his entire time to the position. No matter how remote the place, nor how sparsely settled the section, if on Ohio soil, it should be part of a health jurisdiction, and the officer in charge should devote his full time to the public health.

"I see no reason why in the county of Cuyahoga, for instance, the county commissioners cannot legally be given the right to enter into an arrangement, the wisdom of which is patent to all, and under which the townships and municipalities outside of Cleveland can be joined into a single sanitary district with that city. The apportionment of expense on an entirely equitable base would be a simple matter, and accruing benefit would be both rural and urban because health contamination is of more than local concern. The same could be done in other counties, or groups of counties.

"The survey which we have made finds advocates of the county plan, and others who favor the apportionment of the State into from twelve to fiften districts. Students in economics agree that the greatest loss to the nation is occasioned by deaths from preventable diseases. The State is subdivided into districts for the protection of property from fire, but it remains until this day for government to manifest the same interest in the preservation of life. The thing to be avoided is a cumbersome, expensive organization. The State has gone sufficiently into the matter to convince your honorable body through committee and individual membership, I feel assured, that a very simple and yet relatively inexpensive system can be adopted.

"This subject should not be dismissed without some reference to the deep anxiety which is being evidenced by the federal government in the matter of controlling and wiping out as nearly as possible, venereal diseases. Statistics in camp show conclusively that the very foundation of the health of the nation has been affected. I

(*Concluded on page* 29)

Medical Examination of School Children in the Rural Districts*

By J. N. Hurty, M. D., Secretary Indiana State Board of Health.

NOT to bring up a child in the way he should go, physically, mentally, and morally, is a terrible sin of omission. And when we look about us and behold this sin is everywhere, and when we perceive it is largely the result of a misconception of true economy, then the strongest believer in humanity may be excused if his heart and mind are "sicklied o'er with the pale cast of thought."

The child is the great thing. Our only duty, usefulness, and prayer is to bear healthy children and to bring them up in the way they should go. It is enough to do. What more can we do? What greater glory should we seek?

That the physical condition of our children is deplorable appears in the statistics of every medical inspection that has been published.

Who are we that 70 per cent. of our school children should have rotten teeth? Who are we that thousands of our children are born of diseased parents, born of parents who carry transmissible defects in their germ plasm? Who are we that thousands of our children, on account of vicious environment and wicked neglect, are allowed to become diseased and defective? Who are we that, because of forcing bad air, bad food, and bad sanitation upon our children, they take on tuberculosis and die in early life?

Ignorance does not excuse; and we are not ignorant. On the contrary, we know, but we seem not to understand, and certainly are not sufficiently practical to make practical use of our knowledge.

The prophet says:

"Through wisdom is the house builded; through understanding it is established, and through knowledge the chambers thereof shall be filled with all precious riches."

He was speaking of man; and his formula is eternally true and sound. In the urban and in the rural places, we are not generally well born. There is no medical inspection of would-be parents; and so endless numbers of weaklings are produced. The house is not well builded. Not being well builded, understanding, of which we seem not to be generously possessed, cannot be firmly established. Not being well builded, nor firmly established, knowledge has a poor chance to fill the chambers of the mind with all precious riches.

The fundamental law is known. If we obey, ours is the success. If we fail to obey, down we go.

And here begins our second lesson, which is "The Medical Inspection of School Children in Rural Districts." Nowhere is there greater disobedience of the laws of inheritance and the laws of health than in rural districts.

*From *Monthly Bulletin,* Indiana State Board of Health.

There mating is wholly, entirely, and absolutely haphazard. And there laws of health and well being are largely ignored. In cities, the conditions seem to be a wee bit better, for there typhoid is less, tuberculosis is perhaps less, and the death rate, leaving out accidental deaths, is less. In cities, the people more thoroughly separate themselves from their sewage, and the bath is more in evidence. Adenoids and defects of the nose and throat are more prevalent in the country than in cities, and this despite the purer country air. And it still may be said the reason country air is so pure is because the farmer keeps the bad air in his house.

As in the city schools, we also find in those of the country the larger proportion of children are neglected. Bad teeth prevail to such a degree that we express surprise when a good set is found. Coughs, colds and catarrhs "get" every child one or more times every school term, and some sniffle through every day of every year.

Cases of catarrh, weak and watery eyes, and running ears are found, many dating from the time the helpless youngsters had measles or "scarlet rash." Emaciation from actual starvation is not occasional. In one rural school of twenty-seven pupils, I found seven anemic, emaciated children, and five of these were actually starving. One little wizened girl had had one batter-cake with molasses for breakfast, and in her dinner bucket for lunch was one soggy biscuit and one small apple. All of the twenty-seven pupils in this school needed medical attention. There was not a child that did not have two or more decayed teeth. Every child had suffered from one or more attacks of so-called "cold" during the winter, and sixteen said they had had colds since school opened in the fall. There was not a clean tongue in the school; even the teacher's wore a coat, and she, too, had several decayed teeth and there was a knob at the base of the great toe on her left foot which projected the leather of the shoe a marked distance beyond the sole. Her breath was remindful of the odor of a dead rat. One child had a running ear, seven had defective sight, every child had dirty ears, dirty neck and dirty scalp; and, of course, we found diseased tonsils, enlarged neck glands, pigeon breasts, and skin eruptions. One girl fifteen years old, still in the third grade, suffered with dementia precox. This school was the worst ever found in Indiana. The word "hospital" should have been over the door instead of "District School No. 3." The evidence in this instance was conclusive of the opinion that life is a disease.

In the rural schools of one county, forty-nine cases of trachoma were discovered. The parents were kindly informed by letter and urged not to neglect treatment. Two weeks after, it was found only one child was under treatment, and he was a ward of the county court. Finally, it was necessary to compel most of the parents to save the eyesight of their children. One mother, when asked why she did not take her child to the doctor, said, with a nasal drawl: "Oh, you doctors, you's just got another scheme to git our money." Another mother replied to the same question: "I had them sore eyes when I went to school and I got well. I ain't skeered." And does this not make

plain that finally medical inspection and also care of children by parents must be made compulsory, just as was found necessary in the matter of education?

Medical inspection and health supervision is as greatly needed for teachers as for pupils. A truly sanitary schoolhouse recently erected at the sewerless city of X, was inspected. The architect and the heating and ventilating engineers had done a good job. Every requirement of the law had been met. The lighting was from one side of the rooms and ample. The ventilating ducts were sufficiently large and the heating and ventilating apparatus equal to its task. The floors were hardwood and the desks adjustable and correctly placed. The first room I entered and also the second and third and fourth were evidently well ventilated, for the nose could not detect the staleness and soddenness which characterize the air of the usual urban and rural schoolroom. But alas, when I entered the primary room the olfactory nerve instantly wrote *foul air* upon the appropriate brain centers. What was the matter? Of course, the pupils were heavy-eyed and drooping, and coughing was continuous in all parts of the room. Very languidly, a few of the helpless children looked at the intruders, but most were also thoroughly anesthetized that they never stirred. The teacher, emanciated, with bad teeth and putty skin, was forcing herself to teach the class of foul-air-dummies. What was the matter? I looked at the teacher; she looked at me and cleared her throat. I felt sure she had it, and she did. Her general appearance and the peculiar sound which attends the clearing of the throat of a consumptive were unmistakable. Every room in this up-to-date schoolhouse had a teacher's private closet. My eyes wandered to the room closet. The door was closed, but I knew *they* would be found there safe on the upper shelf. I opened the door, and, sure enough, there they were —two empty and one freshly opened bottles of yellow wrapped cough cure. The poor teacher had not yet risen above the patent medicine stage of ignorance.

I found the reason the air was foul was because the teacher said she was chilly all the time and had closed the exit ventilating duct with a large pasteboard teaching chart. Where consumptive teachers are, there will be bad ventilation.

I have not given here my least, nor even my average experiences, but have presented the worst, for it seems to me it is the worst that is most needed; and even they when published do not bring protest, much less action among those we call good citizens.

One thing is surely true, as proven by numerous medical inspections of rural school children, that is tuberculosis will never materially decrease any time nor anywhere until the awful sin of the neglect of child health is abated to some degree. The first step for abatement is *compulsory health supervision of school children,* because the great majority of parents are woefully ignorant of the health needs of their children, and most of these when told will not act. I believe there will be no marked reduction of tuberculosis from the present rate until medical inspection and health supervision of the child is, like education, made compulsory.

Wood Dust—Its Effect on Health

By R. P. Albaugh, M. D., Director*, Division of Industrial Hygiene, Ohio State Department of Health.

THERE exists, unfortunately, some difference of opinion as regards the effect of wood dust on health. It is thought that this difference of opinion is largely due to the insidious mode of origin of diseases caused by the inhalation of dust. Chronic catarrhal conditions of the respiratory tract, asthma, etc., which are brought about by the constant breathing of wood dust, are often attributed to other causes, a "cold" being usually given credit for the condition.

It has been frequently observed that employers and employees alike consider the inhalation of certain kinds of dust, particularly wood dust, as being actually beneficial to health, and employers often point with pride to some individual in their service who has been exposed to large amounts of dust almost continuously for a number of years and who has gained in weight and is without the other usual symptoms of respiratory disease. On the other hand it is usually found that the labor turnover in this particular process is such as to indicate that many other men employed with him have been affected to such a degree as at least to cause them to seek other employment.

It has also been observed that many persons apparently acquire great toleration for dust inhalation and for this reason it is difficult to determine the degree of harmfulness of various kinds of dust. However, a dusty atmosphere is not a normal atmosphere and the evidence of the harmfulness of wood dust is such as to convince even the most skeptical that every effort should be made to confine the dust in such a way as to prevent its being inhaled.

One of the large life insurance companies has made careful studies of the causes of death in various occupations, and found that of 2,538 deaths from all causes in occupations involving the inhalation of fibre dust, 627 deaths were due to consumption, a proportionate consumption percentage of 24.7, the normal proportionate consumption percentage in the general population being 14.9. The following table taken from Oliver's book on diseases of occupation demonstrates the relative importance of pulmonary tuberculosis:

Occupation	Number deaths due to tuberculosis per 1,000 persons	Number deaths due to tuberculosis per 1,000 deaths
Occupations without production of dust	2.39	381.0
Trades giving rise to metallic dust	5.84	470.6
Trades giving rise to mineral dust..	4.42	403.4
Trades giving rise to dust from wood and paper	5.96	507.5

* On leave of absence.

There are, however, certain detrimental features in connection with wood dust other than its importance as a predisposing cause of tuberculosis, there being at least six dangers or risks in connection with the presence of wood dust in the workroom: (1) The carrying of infection, (2) the irritation of the respiratory and digestive tracts, (3) the cutting off of light, (4) the danger of fire from the accumulation of wood dust and shavings, (5) the danger of accident from slipping on sawdust or stumbling over accumulations, (6) actual poisoning by certain types of wood which contain active principles known to be poisonous.

The probability of infection from the inhalation of bacteria is considerably enhanced by the presence in the air of dust particles because of the fact that dust is easily kicked up from the floor of the work room, carrying with it bacteria that would probably not otherwise be circulated in the air. The pile of sawdust near the woodworking machine is a favored place for the operator to expectorate. When the material expectorated dries and is kicked up with the dust, the opportunity is present for other workers in the same room to contract the many diseases with which spitters may be afflicted. Oliver tells of an experiment conducted to demonstrate the important role played by dust in carrying bacteria. Two hundred and fifty-four guinea pigs were placed in a carpeted room at various heights from the carpet, upon which sputum from a tuberculous person was deposited. When the carpet was dry it was swept two days in succession in such a way as to raise the dust. All of the guinea pigs contracted tuberculosis and in each instance the disease began in the respiratory organs.

Because of its irritating properties, wood dust affects the respiratory tract, the digestive tract, the skin and the ear canals. As there is usually a considerable amount of inorganic dust directly adhering to the lumber, and as there are usually considerable particles of inorganic material detached from the steel knife blades and rollers on sandpapering machines, wood dust is probably almost as irritating as the harder inorganic dust. The human body is well protected against the retention in the body of reasonable amounts of dust inhaled, the cavities of the nose being so constructed as effectively to filter the air unless dust is present in too large amounts. Sneezing also expels much of the dust which has been deposited on the moist mucous membranes. It has been demonstrated by Lehman that from thirty-five to forty-two per cent of white lead dust inhaled reaches the lungs and Miller and Smyth estimate that at least one-third of various other types of inhaled dusts gain entrance to the lungs.

The dusts taken into the body produce a chronic catarrh of the respiratory and digestive organs This leads to a fibrosis which is the same process that is gradually brought about by old age. Then catarrhal conditions and fibroses result in lowered resistance of the damaged parts and invite secondary diseases, which are usually the cause of death. Instruments are available for determining the character and estimating the amount of dust in the air of workrooms, and standards of endurance have been proposed for various types of dust. However, before standards can be definitely established, there must be

considered not only the number of particles in a given amount of air, but also their size, weight and nature, whether poisonous or irritating. Miller and Smyth in conducting experiments in different dusty trades have been able to determine the weight of dust in the volume of air inhaled by workers in various industries and estimate that from four to fifty years are required for one pound of dust to reach the lungs of workers in the particular industries studied, depending upon the amount and character of the dust and the provisions for its removal. The Division of Industrial Hygiene of the State Department of Health is equipped with dust-counting apparatus and will make dust determinations for individual plants at any time. The Division had occasion recently to make dust determinations in the carpenter shop of a plant in which it was thought by proprietors that a minimum amount of dust existed. Actual counts revealed 1,380,400 particles of dust per cubic foot near a planer, 445,600 particles per cubic foot near a hand saw and 330,200 particles per cubic foot in the air of the general workroom at a considerable distance from woodworking machines. To the casual observer, dust did not appear to be a serious hazard, but actual counts revealed amounts which are considered in excess of the amount safe for constant breathing.

The reduction of light resulting from the presence in the air of wood dust is of sufficient importance to produce eyestrain, decrease output and has a great tendency, also, to increase accidents. In addition to accidents due to the actual reduction of light, operators of woodworking machines are frequently blinded by dust or chips of wood striking their eyes, causing their minds to be removed from their work for an instant, allowing the object which the operator is holding and which is being sawed, planed, mortised or sanded, to be thrown back against the operator or to a distance against some other worker, causing serious injury. As dust in the air obstructs light and as wood dust has a tendency to settle on lamps and the glass in windows, its confinement is necessary for the maintenance of maximum illumination.

The danger of fire from the accumulation of wood dust and shavings is extremely great because of the ease with which the shavings of certain kinds of wood ignite. Piles of wood dust are frequently seen near machines in woodworking shops where a lighted match may be carelessly thrown and cause a fire which may smolder and burst forth at a time when no one is in the immediate vicinity. This is especially true of certain kinds of wood which ignite much more readily than others. For this reason alone the removal of all wood dust becomes a matter of great importance to the factory proprietor as well as to the employee. It is maintained by certain observers that the accumulations of dust on globes of incandescent lights have been known to take fire by means of the concentration of light rays, due largely to the absolute dryness of the dust from the heat generated from the incandescent globe.

Floor obstructions have long been given credit for a large number of accidents, many of which have proved very serious. This is due, to a large extent, to the fact that a workman who stumbles over an obstruction may fall in such a way as to come in contact with moving machinery, and because he is in a falling position, cannot disengage

or otherwise protect himself from serious injury. Unless shavings and sawdust are regularly removed from the workroom, the accumulations soon become obstructions. The hazard of slipping on sawdust is especially important.

Certain kinds of wood contain active principles such as alkaloids, glucosides, essential oils and resins, which are known to have a definite toxic effect on the human body. Thus, *boxwood* and *California sequoia* produce asthma, influenza, jaundice, heart depression, mydriasis, conjunctivitis and rhinitis; *East Indian tonquin* wood dust settling in the hair results in the hair turning a bright green color when it is washed; the handling of *cokus* wood is often accompanied by a papular eczema of the lips, ears and face; *cocobola* wood frequently causes a conjunctivitis and dermatitis and it has been said also that workers inhaling the dust from this wood frequently complain of symptoms similar to those encountered in patients having taken an excessive amount of atropine. A peculiar inflammation of the skin has been noticed in workers engaged in handling *satinwood*. The first symptoms consisted of an intense irritation, followed by heat, redness, swelling and pain. At a later stage the skin became moist and peeled off. *Ebony* and *teak* also produce inflammatory skin affections accompanied also, in the case of teak wood, by constitutional symptoms, such as nausea and vomiting. *Japanese hardwood* or *"tagayasa"* causes a dermatitis and a dark brown pigmentation, accompanied by a toxic action upon the digestive and renal organs. *Rosewood, mahogany* and *birch* wood are frequently offending agents in cases of skin irritation among wood workers. Erythema, multiform and pustular acne have been observed in workers handling the woods commonly found in the central states. It is probable that the action of these woods is mechanical only, the irritating and abrasive action of the woods giving rise to minor injuries which present numerous portals of infection.

The prevention of the inhalation of wood dust and its accumulation in the workroom lies in removing such material at the point of origin, which usually means the installation of proper exhaust systems. Hoppers, suction pipes and blowers have proved quite efficient, especially in connection with turning and sanding machines. The Industrial Commission of Ohio is in a position to recommend suitable equipment and also approve contemplated installations. The New York State Department of Labor advises that "the construction of exhaust systems for woodworking machines should be made of extra heavy galvanized pipe, free from obstructions and depressions. All right-angle bends should be eliminated and all bends should be made by means of round elbows. The pipes should be of sufficient size to carry the material under a static suction of not less than three and one-half inches recorded on a 'U' tube. Wherever branch pipes from any machines enter a main, they should connect with it at an angle of not less than forty-five degrees. The main duct conveying the material from the various branch pipes should be not less than twenty per cent greater in area than the area of the sum of the branch pipes. 'Clean-out' doors should be provided at intervals of not less than ten feet. Hoppers beneath all

(*Concluded on page* 29.)

Influenza Rates in Ohio S. A. T. C. Units Comparatively Low

REPORTS on the influenza epidemic collected from twenty-six Ohio colleges and universities which had Students' Army Training Corps units show that 23 per cent of the men enrolled in these units developed influenza, that 8.7 per cent of the influenza cases developed pneumonia and that 21 per cent of the pneumonia cases, or 1.35 per cent of the influenza cases, resulted fatally.

The study covered 9,306 men. The collected figures give 2,145 cases of influenza, 186 cases of

INFLUENZA AND PNEUMONIA CASES AND DEATHS IN S. A. T. C. UNITS IN OHIO COLLEGES AND UNIVERSITIES DURING THE 1918 EPIDEMIC.

Institution	Number Students	No. Cases Influenza	No. Cases Pneumonia	Number Deaths	No. Using Serum	No. Developing Inf. after Use of Serum
Akron	257	31	7	4	257	31
Antioch	54	22	.....	.....	None	None
Athens	287	111	7	.....	None	None
Baldwin-Wallace	188	55	16	1	None	None
Case	350	36	7	2	None	None
Cincinnati	1,614	338	18	8	24	8
Defiance	117	14	4	.....	None	None
Denison	338	96	2	.....	None	None
Heidelberg	134	70	9	2	None	None
Hiram	169	60	2	.....	None	None
Kenyon	176	55	8	2	None	None
Marietta	181	90	4	2	None	None
Miami	397	150	14	4	None	None
Mt. Union	198	12	.....	.....	198	10
Muskingum	173	35	.....	.....	None	None
Oberlin	323	86	2	.....	None	None
Ohio Northern	234	38	1	.....	None	None
Ohio State	1,812	362	15	5	60	3
Ohio Wesleyan	391	96	6	.....	None	None
Otterbein	192	55	22	.....	6	None
St. Ignatius	120	5	2	2	None	None
St. Mary	181	49	.....	.....	None	None
Toledo	269	11	4	3	200	None
Western Reserve	531	50	6	2	None	None
Wilberforce	385	116	30	2	None	None
Wittenberg	235	102	.....	.....	None	None
Total	9,306	2,145	186	39	745	52

pneumonia and 39 deaths. Prophylactic treatment with serum was used upon 745 men in six institutions, and 52 of the 745 men developed influenza after such treatment.

The case rate among the S. A. T. C. men — 230 per thousand persons — is not widely different from the estimated case rate for the entire State for the corresponding period, and the fatality rate is somewhat lower than the estimated rate for the State-at-large in the early stage of the outbreak. Both case rate and death rate are far lower for the S. A. T. C. than they were for Camp Sherman — a fact probably in part explainable by the fact that living conditions among the S. A. T. C. men more nearly approximated civilian conditions than did those at the cantonment.

The accompanying table summarizes the reports from the twenty-six colleges and universities.

Sanitary Conveniences for Cities

By Aden E. Smith, Deputy Inspector, Division of Plumbing, Ohio State Department of Health.

A MUNICIPAL government is accountable to the inhabitants of a city to a certain degree for the preservation of the health of the public by removing liquid-carried wastes and for the furnishing of a pure water supply for drinking, bathing and culinary purposes. A city government, however, should go further and see that all citizens, even the poorest, are provided with bathing and laundry facilities, public drinking fountains and other sanitary equipment necessary to maintenance of good health.

Many cities have partially solved this problem by erecting public comfort stations, public bath houses, public wash houses, street drinking fountains, public playgrounds, municipal natatoriums and other sanitary equipment for the citizens' use, either entirely free or with only a nominal fee charged. In addition to these features, a city government is responsible for the sanitary equipment in all municipal buildings, such as schools, hospitals, prisons, municipal stables and garages, fire houses, police stations and all other buildings owned or controlled by the city.

The people of this country have been educated to demand and expect the best possible living conditions, and for this reason all well regulated cities have inspection departments and ordinances requiring a certain minimum standard for all sanitary equipment within the city in both public and private buildings. Because the general public is beginning to realize the importance of plumbing and all domestic sanitation in relation to

health, municipal plumbing ordinances are being constantly revised, added to and improved.

The inhabitants of the average city desire that their town be beautiful, clean and sanitary. Many, however, overlook some of the vital necessities to obtain these results in the fullest measure. For instance, it is only within the last few years that American cities in general have awakened to the desirability and necessity of public comfort stations in congested districts, parks, recreation piers, and all places where crowds are in the habit of congregating. The saloon has served as a public comfort station for men in many instances and department stores, hotels, etc., have frequently served the same purpose for women. The inconvenience of such a situation tends to demonstrate the necessity of public convenience stations in all cities.

Street drinking fountains are now installed by many cities and serve a useful purpose, when good judgment is used in selecting the proper type. Many so-called sanitary drinking fountains are as detrimental to health as the common drinking cup and the now almost obsolete roller towel. A drinking fountain bubbler should be so constructed that it is impossible for one to touch the nozzle with his lips. It should have a film of water continually overflowing to eliminate dust. It should have quick drainage, to carry away sputum and stale water.

Public playgrounds equipped with shower baths, wading pools and natatoriums, gymnasium apparatus and toilet accommodations also provide a means for cleaner and therefore healthier people.

Public wash houses, either in connection with public bath houses, or built separately, should be provided by cities. These wash houses should be located in the poor or congested districts, where laundry facilities in the homes are limited. They should be equipped with stationary laundry tubs, power washers, steam dryers and mangles. They should be managed so that women would be permitted to use this apparatus for a small fee. Appointments could be made setting aside certain days for a certain list of customers. In this way sanitary equipment would be supplied to a class of people of limited means at a very low cost.

Public bath houses, where the poorer people of the city may bathe and use a swimming pool at a nominal cost or free of charge, should be provided. Children should be admitted to the public bath free and not more than five or ten cents should be charged for adults.

Municipalities should guard against the improper installation of garage catch basins where inflammable and volatile oils are deposited in washing automobiles. Proper installation of these fixtures with proper ventilation, is very often neglected unless the most modern plumbing codes are enforced. The correct construction of garage catch basins not only preserves the health of garage workmen, but preserves life and property by reducing the fire risk and prevents the passage of gas and fumes to the sewerage systems.

Publications of the Ohio State Department of Health

AVAILABLE FOR DISTRIBUTION FEBRUARY 1, 1919.

NOTE. — Publications in this list are grouped according to general topics. Letters prefixed to numbers have the following significance: R., reprint (from the OHIO PUBLIC HEALTH JOURNAL); H. E. B., health education bulletin; A. B., administrative bulletin; S. R., special report; E. C., educational circular. Order by letter and number.

Administration (General and Local)—

R. 1131 — Should Township Trustees Act as a Township Board of Health?
R. 1132 — How to Control Nuisances Arising from Offensive Trades.
R. 1215 — Legal Powers of Boards of Health.
R. 1310—Responsibility of the Health Officer.
R. 1321 — The Abatement of Nuisances.
R. 1330 — The Expenses of Boards of Health.
R. 1402 — The Conservation of Public Health.
R. 1412 — Sociological Aspects of Recent Reorganizations of Health Departments.
R. 1427 — Legal Procedures a Nurse Should Know.
R. 1435 — Orders and Regulations for Village and Township.
R. 1452 — How the Rural Health Officer Can Be of Assistance to a City Health Department.
R. 1506—Health Improvements Needed in Ohio.
R. 1523 — The Economic Loss to the Community from Preventable Diseases.
R. 1528 — The Health Department Under the Commission-Manager Form of Government.
R. 1547 — The Responsibility of the Health Officer in Controlling Epidemics.
R. 1549 — Practical Questions in Health Administration.
R. 1556 — How a Health Officer Can Be Most Useful to His Community.
R. 1626 — State Public Health Organizations.
R. 1702 — Progress and Present Status of the Work of the State Department of Health.
R. 1705 — The Ohio Institute for Public Efficiency; Its Relation to Health Departments.
A. B. 101 — Laws of Ohio—Relating to the Powers and Duties of Boards of Health.
A. B. 105 — Plumbing Code. (Price 20 cents.)
A. B. 106 — Laws of Ohio Relating to Occupational Diseases and Industrial Hygiene.
A. B. 108 — Maternity Boarding Houses and Lying-In Hospitals.
A. B. 112 — Orders and Regulations Recommended for Adoption by Village Health Officers.
A. B. 113 — Orders and Regulations Recommended for Adoption By Village Boards of Health.
A. B. 114 — Orders and Regulations Recommended for Adoption By Township Boards of Health.
A. B. 116—Transit Permit and Regulations for Transportation of Bodies.
A. B. 118—Regulations Governing the Examination of Water.
A. B. 120 — Prevention of Blindness from Inflammation of the Eyes of the New-Born—Laws and Regulations.
A. B. 123—Diseases Notifiable in Ohio.
A. B. 124 — Ohio Tuberculosis Hospital Law — With Regulations for the Government of Hospitals.

A. B. 126 — Orders and Regulations Governing the Sale of Ice Cream, Sodas and Soda Fountain Sundries.
A. B. 128 — Regulations for the Prevention of Venereal Diseases.
A. B. 129 — Regulations for the Prevention and Control of Whooping Cough.
A. B. 130 — Laboratory Service of the Ohio State Department of Health.

Child Hygiene (Including School Hygiene) —

R. 1106—Play and Recreation Movement.
R. 1108 — The Relation of Milk to the Infant Industry.
R. 1115 — Medical Inspection.
R. 1138 — Should the Schools Be Held Responsible for Physical Growth of School Children?
R. 1206 — The Importance of Complete Birth Registration.
R. 1207—The Relation of the Municipality and the Physician to Infant Mortality.
R. 1554 — What May Be Done During the Fall and Winter to Promote Child Hygiene.
R. 1613 — Sewage Disposal for School Buildings.
R. 1614 — The Necessity of Child Welfare Work in the Smaller Communities.
R. 1619 — Maternity Hospitals and Infant Boarding Homes.
R. 1624—The Child as a Community Asset.
R. 1627 — Health of Children in Institutions.
R. 1802 — State Program for Child Welfare.
R. 1805 — Maternity Hospitals as a Rural Need.
R. 1806 — Physical Education in Ohio Schools.
R. 1809 — Baby-Saving in Ohio During Earlier Half of 1918.
H. E. B. 112 — Your Baby's Eyes — How to Save Them.
H. E. B. 119 — Is Physical Supervision in the Public Schools Justifiable?
A. B. 108 — Maternity Boarding Houses and Lying-In Hospitals.
E. C. 110 — The State of Ohio Is Interested in Your Baby.
E. C. 111 — Birth Certificate Facsimile.

Communicable Diseases (Except Tuberculosis and Venereal Diseases)—

R. 1104—The Prevention of Infantile Paralysis.
R. 1107 — How Shall We Guard Against Bacillus Carriers?
R. 1113 — How Shall We Combat Measles and Whooping Cough?
R. 1114—The Common Drinking Cup: What Shall We Do With It?
R. 1116 — Dangers from Bacilli Carriers.
R. 1124—Should the Common Drinking Cup in Public Places Be Abolished?
R. 1134 — How Shall We Discover and Deal With Typhoid Carriers?
R. 1137 — Permissible Variations in Quarantine in Scarlet Fever.
R. 1218 — Acute Poliomyelitis and Cerebrospinal Meningitis; Problems for the Rural Health Officer.
R. 1319 — Preventable Disease.
R. 1323 — The Prevention of Smallpox in Towns and Villages.
R. 1334 — Typhoid Fever in Cleveland in 1912.
R. 1414 — Acute Poliomyelitis.
R. 1420 — Notification of Reportable Diseases.
R. 1423 — The Duration of Quarantine in Transmissible Diseases.
R. 1429 — An Outbreak of Typhoid Fever Due to Contamination of the Water Supply Through a Private Connection.
R. 1440 — Some Advances in Our Knowledge of Infectious Diseases.
R. 1441 — The Mode of Procedure in the Study of Epidemics.
R. 1450 — The Differential Diagnosis of Cerebrospinal Meningitis.
R. 1509 — Methods and Channels of Infection.
R. 1519—Typhus Fever—Its Etiology and the Method of Its Prevention.
R. 1520 — Immunity and Susceptibility.
R. 1523 — The Economic Loss to the Community from Preventable Diseases.
R. 1524 — Limitations of Prevention of Communicable Diseases.

R. 1530—The Lessons from a Smallpox Epidemic.
R. 1531—Protective Inoculation Against Disease.
R. 1544—The Relation of Carriers to the Spread of Disease.
R. 1546—The Collection and Value of Morbidity Statistics.
R. 1547—The Responsibility of the Health Officer in Controlling Epidemics.
R. 1609—The Prevalence and Control of Typhoid Fever in Ohio.
R. 1622—Rabies.
H. E. B. 103—Smallpox: Its Restriction and Prevention.
H. E. B. 106—Typhoid Fever and Its Prevention.
H. E. B. 107—Whooping Cough: Its Prevention and Restriction.
H. E. B. 108—Diphtheria and Membranous Croup.
H. E. B. 111—Important Facts About Common Transmissible Diseases.
H. E. B. 114—Disinfection and Disinfectants.
H. E. B. 115—The House Fly—Carrier of Disease.
H. E. B. 120—Scarlet Fever—Its Restriction and Prevention.
H. E. B. 121—Acute Poliomyelitis—Its Restriction and Prevention.
A. B. 123—Diseases Notifiable in Ohio.
A. B. 129—Regulations for the Prevention and Control of Whooping Cough.
E. C. 117—Influenza: How to Avoid It; How to Care for Those Who Have It. (Poster.)
E. C. 118—Same. (Pocket-size folder.)
E. C. 119—Influenza, Pneumonia and Tuberculosis Are Spread By Careless Spitters. (Cartoon poster.)
E. C. 120—Rabies.

Food and Food Inspection—

R. 1102—Unsanitary Bakeshops.
R. 1112—Protection of Exposed Food Products.
R. 1212—What Cleveland Has Done for Its Milk Supply.
R. 1305—Municipal Meat Inspection.
R. 1437—Market Milk.
R. 1514—Practical Food Inspection.
R. 1515—Certain Foods and Their Relation to Disease.
R. 1620—The Protection of Food Supplies.
R. 1704—The Present Status of Milk Supervision in the Cities of Ohio.

Industrial Hygiene and Occupational Diseases—

R. 1202—Hygienic Factory Construction.
R. 1307—Occupational Diseases.
R. 1313—The Significance of Occupational Diseases and Their Classification.
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R. 1332—Occupational Diseases as They Are Found in Rural Districts.
R. 1418—The Health Hazards of Industries With Special Reference to Ohio.
R. 1421—Lead Poisoning—Its Chief Causes.
R. 1443—Report on the Investigation of Four Cases of Sudden Death Which Took Place at Athens State Hospital.
R. 1444—The Standardization of a Method for the Detection of Lead in Urine.
R. 1458—Critical Examination of One Hundred Painters for Evidence of Lead Poisoning.
R. 1507—A Survey of the Industrial Hygiene of Furnacing, Forging and Blacksmithing, Coremaking, Iron Founding and Brass Founding.
R. 1516—A Survey of the Industrial Hygiene of Machine Shopping, Tempering, Brazing, Welding and Soldering.
R. 1518—A Survey of the Industrial Hygiene of Pickling, Galvanizing, Tinning, Acid Dipping, Electroplating.
R. 1522—A Survey of the Industrial Hygiene of Mixing Chemicals, Wood Working, Gluing, Pasting and Labeling, Painting, Varnishing, Shellacing and Lacquering.
R. 1529—A Survey of the Industrial Hygiene of Enameling, Jappanning, Lithographing, Upholstering, Sewing, Ironing and Pressing, Junk.
R. 1532—A Survey of the Industrial Hygiene of Printing.

R. 1533 — A Collection of Aphorisms on Industrial Hygiene and Occupational Diseases Suitable for Exhibit Purposes.
R. 1539 — A Survey of the Industrial Hygiene of Laundry, Dry Cleaning, Dyeing.
R. 1540 — Foot Strain — An Occupational Disease Among Nurses.
R. 1541 — Report on Investigation of Death Said to Be Due to Pollen Poisoning.
R. 1542 — A Survey of the Industrial Hygiene of Storage Batteries, Dry Batteries, Incandescent Lamp Manufacturing, Rubber.
R. 1550 — The Dangers Connected With the Spray Method of Finishing and Decorating.
R. 1551 — A Survey of the Industrial Hygiene of Rubber, Calendering, Etc.
R. 1557 — A Survey of the Industrial Hygiene of Rubber, Specialty Making.
R. 1558 — A Summary of Occupational Diseases and Diseases Partly Occupational.
R. 1559 — Occupational Heart Disease.
R. 1560—Prevalence of Occupational Factors in Disease and Suggestions for Their Elimination.
R. 1601 — Principles and Scope of the Survey of Industrial Health - Hazards and Occupational Diseases in Ohio.
R. 1604 — Gasoline Engine Gas-Poisoning.
R. 1612 — A Survey of the Industrial Hygiene of Pottery.
R. 1703 — The Relation of Industry to the Health Department.
R. 1707 — Peculiar Poisoning in a Construction Camp.
R. 1804 — Cause and Prevention of Furunculosis and Wound Infections Among Machinists.
R. 1810 — Experiments in Air-Conditioning the Home.
H. E. B. 109 — Industrial Poisons.
H. E. B. 110 — Consumption and Preventable Deaths in American Occupations.
H. E. B. 113 — Are You in Business for Your Health?
A. B. 106—Laws of Ohio Relating to Occupational Diseases and Industrial Hygiene.
S. R. 107—Industrial Health Hazards and Occupational Diseases in Ohio. (Hayhurst's Survey.)
E. C. 103 — Painters, Avoid Lead Poisoning.
E. C. 104 — Printers, Avoid Consumption.
E. C. 105 — Notice: —Instructions to Employees — How to Avoid Lead Poisoning.
E. C. 106 — Mr. Garage Worker: Mr. Motorist: (Gas Poisoning).
E. C. 107—Instructions to Employees in Dusty Trades.
E. C. 109 — Machinists: Avoid Boils and Infections.

Laboratory—

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R. 1309 — The Uses of a Public Health Laboratory.
R. 1622 — Rabies.
A. B. 117 — Distributing Stations.
A. B. 118—Regulations Governing the Examination of Water.
A. B. 130—Laboratory Service of the Ohio State Department of Health.
E. C. 120 — Rabies.

Plumbing and Housing—

R. 1111 — Unsanitary Housing Conditions.
R. 1127 — Sanitary Requirements of the Farmer's Home.
R. 1128—Sanitary Conditions Affecting the Home in Village and Country
R. 1205 — Address of the State Inspector of Plumbing.
R. 1306 — A Constructive Program for Housing Reform.
R. 1324—The Necessity of Plumbing Inspection in Rural Districts.
R. 1401 — Modern Plumbing and Its Relation to the Rural Health Officer.
R. 1409—A Few Don'ts for Plumbers.
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R. 1501 — Report on Investigation of Chemical Closets.

R. 1521 — Plumbing and Its Relation to Health.

R. 1602 — The High Spots for the Adoption of the State Sanitary Codes and State Inspection.

R. 1613—Sewage Disposal for School Buildings in Ohio.

R. 1617 — Sewage Disposal for Residences.

R. 1625 — The Necessity of Sanitary Plumbing.

R. 1628 — Prevention Rather Than Cure.

R. 1810 — Experiments in Air-Conditioning the Home.

H. E. B. 122—Domestic Sanitary Engineering.

A. B. 105 — Plumbing Code. (Price 20 cents.

Public Health Nursing—

R. 1405 — Organized Work for the Prevention of Blindness as Carried on By the Ohio State Commission for the Blind.

R. 1427 — Legal Procedures a Nurse Should Know.

R. 1438 — The Value of the Public Health Nurse to Local Health Authorities.

R. 1513 — Public Health Nursing in Ohio.

R. 1537 — Public Health Nursing Service in Ohio.

R. 1540 — Foot Strain — An Occupational Disease Among Nurses.

R. 1555 — The Development of State Public Health Nursing.

R. 1615 — Securing and Training Nurses for Rural Communities.

H. E. B. 112 — Your Baby's Eyes — How to Save Them.

A. B. 120 — Rules and Regulations for the Prevention of Blindness from Inflammation of the Eyes of the New Born.

S. R. 108—Public Health Nursing in Ohio — Oct., 1915.

Sanitary Engineering—

R. 1004 — Past, Present and Future of the Ohio River from a Sanitary Standpoint.

R. 1105 — Street Dust and Street Cleaning in Relation to Health, Economy and Comfort.

R. 1128—Sanitary Conditions Affecting the Home in Village and Country.

R. 1211 — Collection and Disposal of Municipal Wastes.

R. 1213 — Notes on the Hypochlorite Treatment of Public Water Supplies in the United States.

R. 1216 — The Disposal of Municipal Wastes in Small Cities and Villages.

R. 1302—Report of the Public Water Supply of Cleveland With Reference to the Treatment With Calcium Hypochlorite.

R. 1303 — The Value of Pure Water Supply.

R. 1308 — Deterioration of Public Water Supply and Sewerage Improvements.

R. 1320 — Privies and Cesspools for Residences in Unsewered Districts.

R. 1336 — Municipal Sanitation.

R. 1408 — The Present Status of Sanitary Engineering.

R. 1410 — Opinion of the Attorney General in re Demarcation Between House Sewer and House Drain.

R. 1428 — The Engineering Work of the State Board of Health.

R. 1429 — An Outbreak of Typhoid Fever Due to Contamination of the Water Supply Through a Private Connection.

R. 1446 — Relative Values of Improvements Affecting the Sanitation of Villages.

R. 1447 — The Pollution of Streams in Ohio and the Effects of the Pollution on the Public Health, Live Stock and Fish.

R. 1451 — Public Water Supply for Cities—Some General Considerations.

R. 1456 — Advantages of the Use of Lime in Water Purification.

R. 1457 — Modern Conveniences in Rural Communities.

R. 1501 — Report on Investigation of Chemical Closets.

R. 1503—Municipal Sanitation in Columbus.

R. 1512 — Danger of Polluting the Public Water Supply By Industrial Connections.

R. 1525 — Water Purification at Columbus.

R. 1527—Some Filtration Plant Bacteriological Data.

R. 1535—The Disinfection of Water.
R. 1536—The Sanitary Survey—What It Is.
R. 1608—Ordinances to Control the Use of Sewers.
R. 1611—The Disposal of Wastes from the Dairy Industry.
R. 1613—Sewage Disposal for School Buildings in Ohio.
R. 1616—The Work of the County Sanitary Engineer.
R. 1617—Sewage Disposal for Residences.
R. 1618—Legislation and Prescribed Procedure for Enforcing Correction of Stream Pollution and Improvement of Public Water Supplies.
R. 1623—The Status of Water Purification in Ohio.
R. 1701—The Operation of Sewage Treatment Plants for Public Buildings.
H. E. B. 122—Domestic Sanitary Engineering.
H. E. B. 123—Private Water Supplies.
S. R. 101—Report of an Investigation of Water and Sewage Purification Plants in Ohio.
S. R. 102—Report on Water Supplies on the Ohio River (1915).
S. R. 103—Report of a Study of the Collection and Disposal of City Wastes in Ohio (1910).

Tuberculosis—

R. 1214—Ohio and Its Tuberculosis Problem.
R. 1425—The Present Status of the Tuberculosis Work in Cleveland.
R. 1426—Tuberculosis in State Institutions.
R. 1442—The State Health Department and the Tuberculosis Problem.
R. 1448—The Relation of Private and Municipal Anti-Tuberculosis Activities.
R. 1510—The Tuberculosis Problem.
R. 1803—The Discharged Tuberculous Soldier in Ohio.
R. 1808—Ohio's Tuberculosis Hospital Equipment.
H. E. B. 110—Consumption and Preventable Deaths in American Occupations.
H. E. B. 116—Tuberculosis — What You Should Know About It.
H. E. B. 117—Sleeping and Sitting in the Open Air.
H. E. B. 118—Open Air Sleeping.
A. B. 124—Ohio Tuberculosis Hospital Law (May, 1918) With Regulations for Government of Hospitals.
A. B. 125—Instructions for Patients.
E. C. 102—How to Avoid Consumption.
E. C. 108—Organization of District Tuberculosis Hospital (Chart).

Venereal Diseases and Sex Hygiene—

R. 1130—Should Sexual Hygiene Be Taught in the Public Schools? (Heidingsfeld.)
R. 1326—The Social Evil in Relation to Health Problem.
R. 1505—The Hilltop Tragedy.
H. E. B. 101—The Cause and Prevention of Venereal Diseases.
H. E. B. 124—Some Things a Young Man Should Know About Sex and Sex Diseases.
H. E. B. 125—How Any Boy Can Develop His Health and Strength.
H. E. B. 126—Instructing Your Child in the Facts of Sex.
A. B. 128—Regulations for the Prevention of Venereal Diseases.
E. C. 112—Venereal disease placard (framed).

Miscellaneous—

R. 1103—The Unventilated Gas Stove as a Menace to Health.
R. 1136—When Doctors Disagree Who Shall Decide?
R. 1315—Our Duty in Public Dental Education and Our Relation to the Public Press.
R. 1333—Oral Hygiene as a Factor in the Conservation of Health.
R. 1403—The Psychopathic Hospital and Public Health.
R. 1419—Some Weird Diagnoses as Observed By a Registrar of Vital Statistics.
R. 1422—Pathological Oral Conditions as a Source of Some Systemic Disturbances.
R. 1431—The Relation of the Funeral Director and Embalmer to the Public Health.
R. 1439—The Service of Medicine to Civilization.
R. 1449—Medical Education in Hygiene and Public Health.

R. 1453—The Co-operation of Physicians and Dentists in the Conservation of Health.
R. 1508—The Poisons Secreted By Animals.
R. 1543—The War, Hygiene and the Public Health.
R. 1545—The Movement to Lengthen Life.
R. 1548—The Menace of Inherited Defects.
R. 1552—The Testing of Intelligence in Its Relation to the Public Health.
R. 1603—Report of Wood County Survey.
R. 1605—Progress in Therapeutics for 1915.
R. 1801—Ohio Public Health Journal index, Vol. VIII (1917).
R. 1807—Publications of the State Department of Health.
S. R. 105—Special Report on the Flood of March, 1913.
S. R. 109—Social Service Organizations in Ohio.

Annual Report—

The Department has not published an Annual Report since 1915. A limited supply of reports for the years 1904 to 1915, inclusive, is available for distribution.

Ohio Public Health Journal—

Copies of the Journal and of its predecessor, the *Monthly Bulletin,* from January, 1914, to date, with the exceptions of February, 1914, and March, 1918, are available.

Food Conservation Reflected in Garbage Statistics

STATISTICS on the amount of garbage collected and the amount of garbage grease recovered in representative American cities in 1917 and 1918, as compared with the corresponding figures for 1916, show remarkable decreases, which may be taken as indicative of results obtained by the food conservation propaganda.

The statistics, collected by the United States Food Administration, are set forth by Raymond Pearl, of the School of Hygiene and Public Health of John Hopkins University, in an article in the November issue of the *Journal of Industrial and Engineering Chemistry.*

Reports were received from every city in the country. Of these cities, ninety-six, with an estimated aggregate population of more than 26,000,000, which had kept accurate records for several years, were taken as representative. The figures for these cities show that during 1917 and 1918 ten per cent less garbage was collected than in 1916.

Still more significant than the quantity statistics are the figures on the quality of garbage collected, indicated by the amount of grease recovered. Twelve cities, which have carefully operated reduction plants and accurate records, were chosen as representative in this regard. The twelve cities show a diminution of thirty per cent in the gross tonnage of grease recovered in the period 1917-18 as compared with 1916-17. The percentage of grease in the garbage droped from 2.45 to 1.85. Both of these facts show a great curtailment in the quantity of meats and fats going into the garbage can.

Columbus, Ohio, and Wilmington, Delaware, had the greatest drops in the amount of grease recovered—forty-five and forty-seven per cent, respectively. In other words, these cities' garbage contained only one-half as much fat as formerly.

Guard Against Disease Spread Due to Demobilization, Is U. S. P. H. S. Advice

Now that the soldiers are about to return from overseas, health officers throughout the country will have to exercise the greatest vigilance in order that exotic epidemic diseases may not be carried into this country and spread with disastrous results. Among the hundreds of thousands of returning soldiers a number may exist, probably will exist, who will be carriers of diseases ordinarily not prevalent in this country, or not prevalent in that part of the country to which the soldier returns. Among the diseases especially to be feared are cholera, typhus and plague.

The danger is by no means imaginary, hence explicit instructions have been issued to all quarantine officers, urging the most careful examination, including laboratory tests, of all units liable to be carriers of these diseases. In addition to this, officers of the Public Health Service trained in quarantine procedure either have ben sent to various ports of Europe or will be sent as the occasion may arise. There they will supervise the enforcement of the United States quarantine regulations applicable at foreign ports against ships and passengers destined for ports of the United States. It is expected that compliance with the quarantine regulations, as bearing on returning troops, will be effected by the cooperation of the United States military authorities in the examination, delousing, and disinfection, when necessary, of the troops prior to embarkation.

While all persons, even soldiers, entering the ports of this country, are subjected to the United States quarantine regulations, the entry of the returning soldiers will be facilitated by the effective co operation which the officers of the Public Health Service receive from their colleagues in the Army and Navy. The plans now being worked out include a careful medical examination of all the soldiers prior to embarkation, delousing of all the clothing and other infested materials, the holding of suspicious cases for a period of observation and examination, in short all measures needed to insure that no cholera, plague, typhus, trench fever, or other exotic disease is introduced into this country.

In the opinion of competent observers there is little danger of the introduction of cholera from the soldiers now in France and Germany. On the Russian front, however, conditions are by no means so satisfactory, for the country is still in a chaotic condition and cholera has been known to be prevalent in various sections. It is from this quarter, also, that the possibility of the introduction of plague must be considered.

Somewhat similar precautions will be taken to prevent, or at least minimize, the spread of disease by soldiers discharged from training camps. It may be recalled that after the Civil War many Northern states were seeded with malaria carried home by soldiers who had contracted the infection in the South. So far as this disease is concerned, however, the antimalaria work carried on by the Army and the Public Health Service in and around the training camps, has ben so thorough that the danger from this source is negligible.

Altogether the coming few years will be very busy for health authorities everywhere and it is to be hoped that the public will realize the need of giving them the greatest possible support and co-operation. —*Public Health Reports,* United States Public Health Service.

Governor Urges Health Reform in Biennial Message

(*Continued from page* 10.)

voice no misanthropic spirit in the observation that if a disease as destructive as venereals have been to humanity, were to appear in the blooded live-stock of this country, ten times more money would be spent within a year from public and private purse than has been disbursed in the forty-eight states of this union in the last twenty-five years for the purpose of combating destructive effects of venereals.

"Americans have established a a reputation for efficiency, but that efficiency consists too largely in our genius and our time being applied to the conservation of material, rather than the vital things of life."

Wood Dust — Its Effect on Health

(*Continued from page* 17.)

woodworking machines should be of sufficient size to catch all material thrown off by the knives. Wherever it is possible to provide a hood above revolving knives, without interfering with the material being worked, such hoods should be provided. The main duct entering the cyclone collector should enter such collector at an angle of not less than forty-five degrees, the outlet of which should not be less than three times the area of the main duct."

It is evident that persons handling toxic woods should protect their hands either by gloves or by some harmless oily substance, such as petrolatum, and that they should also wash the exposed parts of their bodies frequently. Adequate local and general ventilation of the workroom is also essential.

U. S. P. H. S. BULLETIN ON DISEASES OF CHILDREN.

In Public Health Bulletin No. 95, just published by the United States Public Health Service, a study of 6,078 cases of infectious diseases among immigrant children is reported. The study related especially to cross infection and hospital management.

"Opinion in regard to the proper management of contagious diseases treated in hospitals," the author (J. G. Wilson) states in the introduction, "has undergone much change within the past decade. The old idea that infection occurs through the air and that a distinct quarantine must be drawn between wards and buildings containing patients with different contagious diseases has been gradually abandoned. This bulletin tries to show how in the Ellis Island Hospital the new methods have worked out in practice and suggests changes which will result in additional improvements."

The main conclusion reached as a result of the study is the practicability of treating contagious and noncontagious diseases in the same hospital and with the same nursing force. "While it is not advisable," the bulletin states, "to use the same open wards for both classes of cases, it has, nevertheless, been demonstrated that if these wards are cut up into small cubicles and the proper nursing technique enforced there is practically no danger of cross infection."

OCTOBER'S NURSING WORK SUMMARIZED.

Ohio public health nurses who reported to the State Department of Health on their October activities cared for 10,782 patients during the month. Toledo led in both number of home visits and number of patients under care, with 8,132 of the former and 5,774 of the latter. The Columbus Visiting Nurses' Association was second, with 2,600 home visits and 1,126 patients. Other Columbus patients to the number of 1,043 were cared for by the Anti-Tuberculosis League nurses.

The reports cover 22 cities, two villages and one county, employing altogether sixty-eight nurses. The total number of home visits was 17,737.

Tuberculosis furnished most of the patients under care, having a total of 4,098. Other classified totals are: Communicable diseases other than tuberculosis 600, prenatal 49, postnatal 94, infants under two years of age (except eye) 350, eye (under two years) 2,368, eye (over two years) 9, other diseases (medical) 2,222, other diseases (surgical) 915, social service 27.

POLIO REPORT ISSUED.

A report of epidemiologic studies of poliomyelitis made during 1916 has recently been published by the United States Public Health Service as Public Health Bulletin No. 91. The report covers a general statistical and epidemiologic study of the epidemic in New York City and the northeastern United States, intensive studies of the epidemics in the borough of Richmond, in certain counties in New Jersey, in Hartford County, Conn., and of some scattered cases in Connecticut and Rhode Island, and certain miscellaneous studies. Present knowledge in regard to the epidemiology of poliomyelitis is summarized.

DEPARTMENTAL REPORTS BY DIVISIONS

DIVISION OF COMMUNICABLE DISEASES.

Reported Cases of Notifiable Diseases December, 1918.

Prevalence.—In order of greatest reported prevalence for the month of December the diseases list as follows, with comparative figures for November given:

	Disease.	Reported Cases. *December.*	*November.*
1.	Influenza	63,094	53,664
2.	Pneumonia, acute lobar	1,252	1,486
3.	Measles	396	168
4.	Diphtheria	369	504
5.	Tuberculosis, all forms	354	274
6.	Scarlet fever	346	382
7.	Chickenpox	291	255
8.	Whooping cough	266	268
9.	Smallpox	245	460
10.	Gonorrhea	200	321
11.	Pneumonia, broncho	144	110
12.	Syphilis	133	177
13.	Ophthalmia neonatorum	114	103
14.	Mumps	103	174

For the month of December 67,482 cases of notifiable diseases were recorded to date (January 10)— 59,971 more cases than were recorded for December, 1917, the remarkable increase in prevalence due to epidemic influenza and pneumonia. The cities of the state reported 45,676 cases, 68 percent of the entire amount as compared with 62 percent reported by cities in December, 1917.

Pneumonia.—The 1,252 reported cases of acute lobar pneumonia for the month of December, of this year, indicate stationary prevalence as compared with last month's report for this disease, and a high degree of pneumonia prevalence for the remaining winter months. There were 404 reported cases in December, 1917, 411 reported cases in December, 1916, and 659 reported cases in December, 1915. Morbidity statistics of pneumonia under normal health conditions show a marked increase of reported cases for winter months.

Measles.—Measles has changed its position in the scale since last month. For November, this disease ranked twelfth as compared with third, in reported cases, this month. There were 396 reported cases this month compared with 168 cases in November, an increase of 135 percent. For December, 1917, 626 cases of measles were reported, and 1,560 in December, 1916. A study of the history and statistical records for measles in this State shows a marked increase in winter, beginning with January and continuing until early summer .

Smallpox.—Smallpox shows a marked decrease for the month as compared with last month's report. The 245 cases were reported by counties, in order of prevalence, as follows: Butler 41, Lorain 37, Cuyahoga 25, Coshocton 22, Montgomery 21, Lucas 12, Marion 10, Hamilton and Jefferson 9 each, Fayette 8, Muskingum and Warren 7 each, Paulding 6, Crawford 5, Clinton 4, Belmont 3, Hardin, Harrison, Sandusky and Seneca 2 each, Defiance, Franklin, Fulton, Highland, Huron, Lake, Pike, Portage, Preble, Scioto and Stark 1 each; indicating the distribution of smallpox throught the state.

Meningitis, Cerebrospinal.—Twelve cases of meningitis were reported by counties as follows: Belmont 2, Athens, Clinton, Cuyahoga, Erie, Fairfield, Franklin, Hamilton, Morgan, Richland, and Warren 1 each. This report shows an increase of 33 percent over November reports.

December Reports.—The morbidity summary reports for the month of December were received at this office at an earlier date than for any month since the appearance of the influenza epidemic in this State, indicating a more serious purpose and interest on the part of the health officer for the protection of his community and State. A careful perusal of the following suggestions should induce every health officer to frame a fitting New Year's resolution:

1. Acquaint yourself with State and local health laws.
2. Impress physicians with the knowledge they must report to you.

3. When no physician is employed, remember that parent, guardian, school institution, owner and lessee of building where disease exists is responsible for reporting.

4. Every Monday and oftener if necessary, mail all case cards of every reportable disease to the State Department of Health.

5. Mail monthly summary cards to this Department before the fifth of each month; these are the United States Public Health Service cards and have nothing to do with your weekly report.

6. The health officer or clerk must keep a record of all reportable diseases in record book for that purpose.

7. Communicate with State Health Department for any special information.

TABLE 1. REPORTED CASES OF NOTIFIABLE DISEASES, OHIO, DECEMBER, 1916-1918, WITH DISTRIBUTION FOR CITIES AND FOR VILLAGES AND TOWNSHIPS, DECEMBER, 1918, AND CASE RATES PER 1,000 POPULATION, DECEMBER, 1916-1918.

Disease.	December, 1918.			December, 1917.	December, 1916.	December Case Rates Per 1,000 Population.		
	Cities.	Villages and Townships.	Total.			1918.	1917.	1916.
All Notifiable Diseases (Influenza excepted)*	2,541	1,847	4,388	7,511	6,818	.834	1.442	1.323
Chickenpox	184	107	291	1,504	1,347	.055	.289	.261
Diphtheria	290	79	369	796	934	.070	.153	.181
Gonorrhea	184	16	200	96	124	.038	.018	.024
Measles	210	186	396	626	1,560	.075	.120	.303
Measles, German	10	11	21	195	37	.004	.037	.007
Meningitis, Cerebrospinal	6	6	12	32	13	.002	.006	.003
Mumps	22	81	103	530	130	.020	.102	.025
Ophthalmia Neonatorum	112	2	114	110	136	.021	.021	.026
Pneumonia, Acute Lobar	599	653	1,252	411	404	.238	.079	.078
†Pneumonia, Broncho	108	36	144	†	†	.027	†	†
Poliomyelitis	1	.....	1	8	7	.000	.002	.001
Scarlet Fever	171	175	346	841	860	.066	.161	.167
Smallpox	125	120	245	1,118	228	.047	.215	.044
Syphilis	108	25	133	54	74	.025	.010	.014
Trachoma	21	3	24	20	34	.005	.004	.007
Tuberculosis, All Forms	289	65	354	442	416	.067	.085	.081
Typhoid Fever	32	53	85	111	160	.016	.021	.031
Whooping Cough	61	205	266	581	344	.051	.112	.067
Other Notifiable Diseases	8	24	32	36	10	.006	.007	.002

* No influenza morbidity statistics for comparative study.
† Not reportable until October 11, 1918.

TABLE II. REPORTED CASES, TEN NOTIFIABLE DISEASES, WITH CASE RATES PER 1,000 POPULATION, OHIO CITIES, DECEMBER, 1918.

City.	Total Case Rates Per 1,000 Population.	Total Reported Cases.	Diphtheria.	Measles.	Meningitis, Cerebrospinal.	Pneumonia, Acute Lobar.	Poliomyelitis.	Scarlet Fever.	Smallpox.	Tuberculosis, All Forms.	Typhoid Fever.	Whooping Cough.
Total	.646	1,795	293	215	6	597	1	160	139	290	33	61
Akron	1.034	94	16	1	....	....	....	10	....	49	3	15
Alliance	.050	1	....	....	....	....	....	....	1	....	....	....
Ashland	.222	2	1	....	....	....	....	1	....	....	....	....
Ashtabula	.135	3	....	....	....	1	....	....	....	2	....	....
Athens	.402	3	....	....	....	....	....	2	....	1	....	....
Bellaire	.630	10	1	....	....	2	....	3	3	1	....	....
Bellevue	1.141	7	....	....	....	7	....	....	....	....	....	....
Bowling Green	.187	1	....	....	....	....	....	1	....	....	....	....
Bucyrus	.424	4	....	....	....	....	....	1	2	....	1	....
Canton	.300	20	9	5	....	....	....	2	....	3	1	....
Chillicothe	1.638	26	4	15	....	2	....	3	....	....	2	....
Cincinnati	.442	221	54	5	1	51	....	19	2	78	1	10
Circleville	.444	3	3	....	....	....	....	....	....	....	....	....
Cleveland	.649	649	97	17	1	370	....	39	23	83	7	12
Columbus	.152	38	2	8	1	....	....	16	1	10	....	....
Conneaut	.428	4	3	....	....	....	....	....	....	....	1	....
Coshocton	.574	7	....	....	....	....	....	1	6	....	....	....
Dayton	.217	31	11	....	....	7	....	2	5	6	....	....
Defiance	2.448	18	....	1	....	17	....	....	....	....	....	....
Delaware	.100	1	....	....	....	....	....	1	....	....	....	....
Delphos	3.660	20	....	....	....	19	....	....	....	1	....	....
East Cleveland	.345	5	2	....	....	....	....	3	....	....	....	....
Elyria	.650	13	4	....	....	....	....	1	6	1	1	....
Findlay	.335	5	1	2	....	1	....	1	....	....	....	....
Fostoria	.270	3	1	....	....	....	....	....	....	1	....	1
Fremont	1.782	18	....	....	....	15	....	1	1	....	1	....
Galion	.973	7	....	....	....	7	....	....	....	....	....	....
Gallipolis	.704	4	....	....	....	....	....	1	....	2	1	....
Greenville	.584	4	....	2	....	....	....	2	....	....	....	....
Hamilton	.924	42	....	....	....	8	....	1	27	6	....	....
Ironton	.490	7	1	1	....	2	....	....	....	....	3	....
Lancaster	.671	11	1	3	1	2	....	3	....	1	....	....
Lima	.540	18	6	1	....	....	....	....	11	....	....	....
Lorain	.925	37	6	....	....	18	....	4	7	1	....	1
Mansfield	.688	16	....	....	1	13	....	....	....	2	....	....
Marietta	.134	2	1	....	....	....	....	1	....	....	....	....
Marion	.480	12	....	....	....	9	....	....	3	....	....	....
Martins Ferry	.097	1	....	1	....	....	....	....	....	....	....	....
Middletown	.915	15	3	5	....	2	....	....	3	1	1	....
Newark	.256	8	1	....	....	....	....	5	....	....	2	....
Niles	.110	1	1	....	....	....	....	....	....	....	....	....
Norwood	.943	23	1	1	....	20	....	1	....	....	....	....
Painesville	.170	1	....	....	....	....	....	....	1	....	....	....
Piqua	.621	9	....	....	....	7	....	....	....	....	2	....
Portsmouth	.165	5	1	....	....	....	....	1	1	1	....	1
Ravenna	.156	1	1	....	....	....	....	....	....	....	....	....

TABLE II. REPORTED CASES, TEN NOTIFIABLE DISEASES, WITH CASE RATES PER 1,000 POPULATION, OHIO CITIES, DECEMBER, 1918 — Concluded.

City.	Total Case Rates Per 1,000 Population.	Total Reported Cases.	Diphtheria.	Measles.	Meningitis, Cerebrospinal.	Pneumonia, Acute Lobar.	Poliomyelitis.	Scarlet Fever.	Smallpox.	Tuberculosis, All Forms.	Typhoid Fever.	Whooping Cough.
St. Marys	.166	1	....	....	....	....	....	1	....	....	....	....
Salem	.297	3	....	....	....	....	....	....	....	....	....	3
Sandusky	.490	10	2	....	1	....	....	....	....	3	....	4
Sidney	.952	7	6	1	....	....	....	....	....	....	....	....
Springfield	2.698	142	2	134	....	1	....	....	....	2	....	3
Steubenville	.420	12	1	....	....	....	....	1	8	....	....	2
Tiffin	.380	5	....	....	....	1	....	....	2	1	1	....
Toledo	.670	134	45	8	....	9	1	27	12	21	2	9
Troy	.316	2	....	1	....	....	....	....	....	1	....	....
Urbana	.351	3	....	....	....	1	....	1	....	1	....	....
Van Wert	.387	3	2	....	....	....	....	....	....	....	1	....
Warren	.814	11	....	3	....	....	....	1	....	7	....	....
Washington C. H.	1.053	9	....	....	....	....	....	1	7	1	....	....
Wellston	.145	1	1	....	....	....	....	....	....	....	....	....
Wellsville	.220	2	....	....	....	....	....	....	....	....	2	....
Wooster	.322	2	....	....	....	1	....	....	....	1	....	....
Xenia	.460	4	....	....	....	4	....	....	....	....	....	....
Zanesville	.403	13	2	....	....	....	....	2	7	2	....	....

*The omission of certain cities is due to the following reasons: Bellefontaine, Dover, East Liverpool, Jackson, Kenton, Massillon, Mt. Vernon, Nelsonville, Norwalk and Wapakoneta reported no cases of the diseases listed; Barberton, Cambridge, Lakewood, New Philadelphia, St. Bernard and Youngstown failed to submit their summary reports by date of going to press.

DIVISION OF INDUSTRIAL HYGIENE.

Summary of Activities in December, 1918.

The Division's separate reports on the coal-mining industry in Ohio and Illinois were completed during the month and a complete report on the coal-mining industry was in progress.

The consultant attended the annual meeting of the American Public Health Association at Chicago, and read a paper at one of the sessions.

Nine requests for advice were received; the desired advice was given in seven cases and the other two were pending closure at the end of the month. One industrial hygiene complaint was received, closure of which was pending at the end of the month.

Fifteen non-specific reports of occupational disease were received, together with 274 reports of tuberculosis in industrial workers. Sixty-three pieces of literature were distributed. Forty industrial hygiene citations were listed for the Division library. Nine conferences and consultations were held.

DIVISION OF PUBLIC HEALTH EDUCATION AND TUBERCULOSIS.

Summary of Activities in December, 1918.

Under the plan outlined in November report, eighteen local draft boards reported the names and addresses of 373 men rejected on account of tuberculosis. The following tabulates the information received:

Draft Board.	Examined.	Rejected — Tuberculosis.	Percent Rejected.
Athens County	1,591	15	.942
Springfield	4,440	20	.450
Coshocton County	1,116	18	1.61
Crawford County	1,760	6	.340
Cleveland, Board 8	2,588	.....	.0
Cleveland, Board 11	3,635	11	.302
Cleveland, Board 2	1,233	5	.405
Fayette County	848	14	1.65
Highland County	590	7	1.18
Lawrence County	.....	27	.....
Licking County	934	12	1.28
Lucas County	1,348	14	1.03
Youngstown, Board 2	2,802	3	.107*
Medina County	979	4	.418
Miami County	1,758	35	1.99
Ottawa County	775	100	12.90
Preble County	1,103	4	.362
Ross County	.....	29	.....
Akron, Board 2	5,049	24	.474
Warren County	675	25	3.70

* Figure for last registration only.

Notifications of admissions and discharges were received from tuberculosis hospitals as follows:

Institution.	*Patients. Reported.*	*Admissions.*	*Discharges.*
Ohio State Sanatorium	47	32	18
Butler County Sanatorium	3	3	0
Franklin County Sanatorium	27	24	6
Lucas County Hospital	28	13	19
Dayton Hospital	26	17	12
Lima Hospital	1	..	1
Springfield District	15	7	8
Springfield Lake	..	..	..
Mt. Logan Sanatorium	9	4	6
Rocky Glen Sanatorium	1	..	1
St. Anthony's Hospital	11	7	7
Total	168	107	78

Total notifications 185: Referred to local public health nurses 145, investigated by Division nurses 12, histories unobtainable 10, pending investigation at end of month 18.

Total pending December 1 from November, 60: Referred to local public health nurse 1, investigated by Division nurses 16, still pending at end of month 43.

Total pending investigation January 1, 61.

Notifications of discharged tuberculous soldiers received during the month, with totals since the beginning of work in behalf of these men, are summarized as follows:

	December.	*Total.*
Notifications received	10	881
Cases referred to Public Health Nurses	8	596
Reports received from Public Health Nurses	8	331
Cases written directly	2	280
Replies received	2	81
Cases visited by Division nurses	39	231
Cases admitted to sanatoria	2	37
Cases not found	1	136
Cases not heard from	8	168

The following changes were made in the Public Health Nursing Service:

Miss Lydia Barnes was appointed county nurse for Tuscarawas County.

Miss Effie Stinehour resigned as public health nurse at Ashland and was added to the nursing staff of the State Department of Health; she is succeeded by Miss Mary J. Hayden.

Miss Mabel Smith resigned as public health nurse at Shelby.

Miss Lela G. Goddard resigned as public health nurse at Cuyahoga Falls and is to be appointed superintendent of nurses at Canton.

Miss Annie J. Cunningham resigned as public health nurse at Bellefontaine and is succeeded by her sister, Miss Amy J. Cunningham.

Miss Thelma Wendt, public health nurse at Lorain, resigned to devote her time to the employees of the National Tube Company, Lorain; the company supports the nursing work in Lorain.

Prevention of blindness work during the month is summarized as follows:

Reported cases of inflammation of the eyes of the newborn 117, classified as follows: (By color) white 106, colored 10, unknown 1; (by source of report) reported by physicians 15, reported by midwives 38, reported by nurses 20, reported by physicians and nurses 2, reported by physicians and midwives 1, reported by institutions 41. Instructions were given to health officers by telephone in two cases, two cases were investigated by Division nurses and one case was provided with nursing care.

DIVISION OF SANITARY ENGINEERING.

Summary of Activities in December, 1918.

Investigations by the Division during December dealt with seven existing water supplies and one proposed sewerage system. Seven sets of sewerage and sewage treatment plans and two sets of water supply plans were received for examination.

In a report to the Commissioner of Health on the proposed additional water supply for Mansfield, the approval granted by the State Board of Health in 1915 was renewed. An ordinance of the village of Centerburg relating to the use of sewers was approved, fulfilling the second condition of approval of plans for a sewage treatment plant issued in August, 1915.

Thirteen conferences on various sanitary engineering subjects were held during the month.

The use by the Ohio Electric Railway of Crystal Spring water, distributed through private enterprise at Newark, was approved. The public water supplies of Newark, Napoleon and Nelsonville were disapproved for railroad use, certificates for their use being refused, respectively, to the Baltimore and Ohio, Detroit, Toledo and Ironton and Hocking Valley railroads.

DIVISION OF LABORATORIES.

Summary of Activities in December, 1918.

The Division made 263 examinations during the month, of which 1,062 were bacteriological and 201 were chemical. The bacteriological examinations, with their results, were as follows:

Tuberculosis, pos. 67, neg. 202	269
Diphtheria, pos. 59, neg. 242, susp. 8, no growth 17	326
Typhoid, pos. 12, neg. 21	33
Wassermann, pos. 78, neg. 262, unsat. 13	353
Gonorrhea, pos. 0, neg. 15	15
Sewage	2
Water	56
Rabies, pos. 4, neg. 4	8
Total	1,062

Outfits were distributed in the following quantities: tuberculosis 334, diphtheria 420, typhoid 130, malaria 17, Wassermann 506, ophthalmia 1,355, typhoid vaccine 20, miscellaneous 254, chemical water and sewage 12, bacterial water and sewage 118, total 3,186.

The chemical samples examined included 86 specimens of foods and 12 of drugs. Results of the food examinations were: satisfactory 38, misbranded 4, adulterated 38, insufficient information 6. The misbranded products were three lemon extracts and one egg substitute. Those found adulterated were 16 samples of milk, 20 of vinegar, one of lard and one of miscellaneous extracts.

The drugs were reported as follows: satisfactory 9, misbranded 1, adulterated 2. The misbranded products and one of the adulterated were classed as miscellaneous drugs, and the other one misbranded was a sample of tincture of iodine.

DIVISION OF PLUMBING.

Summary of Activities in December, 1918.

Forty-three inspections were made in December. Three conferences were held. Ten investigations were made. Six orders were issued. Two sets of plans were approved and nineteen certificates of approval were issued.

BUREAU OF PUBLICITY, DIVISION OF ADMINISTRATION.

Summary of Activities in December, 1918.

Nine publicity stories were released during December, including eight weekly News Letter stories and one article on the influenza situation for the *Ohio State Medical Journal*. News Letter stories appeared in 112 papers in sixty-seven counties and in eighty-nine cities and villages, attaining a total "story circulation" of 2,154,109 (incomplete) printed copies, or an average of 269,263 per story.

Publications received from the printer and now available for distribution are: Health Education Bulletin 124 B, "Some Things a Young Man Should Know About Sex and Sex Diseases" (second edition); H. E. B. 125 B, "How Any Boy Can Develop His Health and Strength" (second edition); H. E. B. 126 B, "Instructing Your Child in the Facts of Sex" (second edition); Educational Circular 114, " A Few Facts About Gonorrhea"; E. C. 115, "A Few Facts About Syphilis"; E. C. 116, "A Few Facts About Chancroids"; E. C. 119, "Influenza, Pneumonia and Tuberculosis Are Spread by Careless Spitters" (cartoon poster). Seven publications were in the hands of the printer. Distribution of publications during the month amounted to 9,080 copies.

Copy was prepared for Volume IX, Number 10, of the OHIO PUBLIC HEALTH JOURNAL (December, 1918). Among names added to the JOURNAL mailing list were those of the members of the Eighty-third General Assembly.

Twelve volumes were added to the Department Library.

HEALTH OFFICERS' ROUNDTABLE

City Pasteurization Plant.

That a municipal pasteurization plant is a practical means of obtaining a pure milk supply for a small town is indicated by experience with such an establishment in Tarboro, North Carolina. The plant and its operation are described by Passed Assistant Surgeon K. E. Miller of the United States Public Health Service, who is acting health officer of the county in which Tarboro is located.

The Tarboro pasteurization plant began operations October 1, 1918. After six weks' experience Dr. Miller expressed the view that the scheme had fully justified every expectation and reported that the plant was not only self-supporting, but was yielding a certain amount of revenue.

Milk is purchased from producers at twelve cents a quart and sold to consumers at seventeen cents. The sale of non-pasteurized milk in the town is forbidden by the terms of the ordinance establishing the municipal pasteurization plant. The total cost of the entire

installation, including machinery and delivery facilities was in the neighborhood of thirteen hundred dollars.

Fixing Blame for Deaths.

Holding that every diphtheria death indicates a blunder by some one in failing to give antitoxin in time to save the life, the North Carolina state board of health is beginning a campaign in which every diphtheria death will be investigated by an epidemiologist with a view to fixing responsibility.

Dairy Scorecard.

"In the early development of dairy farm inspection it was realized that it would be necessary to devise some system to insure uniformity of inspection. Originally the milk control official visited the dairies, made comments, and took notes for future reference. There was no system of comparison between dairies and no method of determining their sanitary rating or standing in the community," says the Bureau of Animal Industry, United States Department of Agriculture.

"The first score card in which a numerical rating was given was developed in 1904. During the next three years a committee from the Official Dairy Instructors' Association studied the situation and evolved the general outline of the card now used by the Bureau of Animal Industry, and known as the official score card. The merits of this card were recognized from the first, and its use has spread among milk control officials until at the present time 240 cities, 25 state departments and 50 educational institutions carry on inspection with the dairy farm score card.

"There is no doubt that the score card is a great factor in the campaign for a better milk supply and has a place of equal importance with bacterial control."

The bureau points out that the score card promises uniformity of inspection, promotes friendly rivalry among dairymen, educates both the dairymen and the public and systematizes the work of inspection.

PUBLIC HEALTH NOTES FROM OVER THE STATE

Just before her departure from Bellefontaine following her resignation as public health nurse there, Miss Annie J. Cunningham was elected to honorary life membership in the Logan County Medical Society, of which she was already an honrary member. Miss Cunningham was also a member of the Bellefontaine board of health. She is succeded as public health nurse by her sister, Miss Amy J. Cunningham.

* * *

"This Careless Spit May Cause a Death" is the striking warning posted during a recent anti-spitting campaign upon Cincinnati sidewalks at every place where any one had expectorated. Boy Scouts

did the pasting under the direction of the Cincinnati Anti-Tuberculosis League.

* * *

The Cleveland Visiting Nurses' Association has elected the following officers: Honorary president, Miss Laura Hilliard; president, Mrs. S. Lewis Smith; vice president, Mrs. Alfred Brewster; financial secretary, P. W. Harvey; recording secretary, Mrs. Dean Matthews; treasurer, Edmund Clark.

* * *

Expansion of Chillicothe district tuberculosis hospital—Mt. Logan Sanatorium—is planned. County commissioners of the district have agreed to the expenditure of $10,000, probably on cottages.

LEAGUE ON RECORD FOR HEALTH CONSERVATION.

An organization known as the People's League, recently established at Springfield with a membership of one thousand, has included in its constitution several resolutions favoring health conservation. These paragraphs ininclude the following:

"We favor broadening the scope of health departments so there may be established in schools, workshops, factories and homes, improved methods to promote health, sanitation, and sickness and accident prevention.

"We demand the enactment of ordinances that will regulate building conditions so as to promote human welfare and deny permits to build houses used for human habitation unless they include modern sanitary fixtures. We urge the elimination of all homes built in alleys and all insanitary habitations used for human abode or work places.

"We favor constructive city planning that will include the abolition of tenement districts, that will create public parks, playgrounds and play spaces, that will restore creeks and rivers now used for sewage purposes to pure running streams. * * * [We favor] vocational education to rehabilitate persons injured through accident or other causes.

"We advocate the conservation of child life and are unalterably opposed to child labor."

TUBERCULOSIS INSTITUTES.

Two 1919 institutes for tuberculosis workers, instead of one as in previous years, have ben announced by the National Tuberculosis Association. The first was to start January 27 and continue until February 12 and the second is announced for the period from May 26 to June 11. Both institutes, which will cover the same fields of work, will be under the direction of Dr. Philip P. Jacobs, assistant secretary of the Association.

DISEASES NOTIFIABLE IN OHIO.

Peport cases or suspected cases of the following diseases to the health officer having jurisdiction.

NOTIFIABLE INFECTIOUS DISEASES OF COMMON OCCURRENCE.

Chancroid.
Chickenpox.
Diphtheria and Membranous Croup.
Gonorrhea.
Influenza.
Measles.
Measles, German.
Meningitis, Epidemic Cerebrospinal.
Mumps.
Ophthalmia Neonatorum.
Pneumonia, Lobar.
Pneumonia, Broncho.
Poliomyelitis, acute infectious, (Infantile Paralysis).
Scarlet Fever.
Smallpox.
Syphilis.
Trachoma.
Tuberculosis, all forms, the organ or part affected to be specified.
Typhoid Fever.
Whooping Cough.

OTHER NOTIFIABLE INFECTIOUS DISEASES.

Actinomycosis.
Anthrax, human.
Cholera, Asiatic, (cholera nostras when Asiatic cholera is present or threatened).
Continued fever lasting seven days.
Dengue.
Dysentery:
a. Amebic.
b. Bacillary.
Favus.
Glanders, human.
Hookworm Disease.
Leprosy.
Malaria
Paragonimiasis.
Paratyphoid Fever.
Plague.
Rabies, human.
Rocky Mountain spotted, or tick fever.
Septic sore throat.
Tetanus.
Trichinosis.
Typhus Fever.
Yellow Fever.

OCCUPATIONAL DISEASES AND DISABILITIES.

Anilin Poisoning.
Arsenic Poisoning.
Benzine (Gasoline) Poisoning.
Benzol Poisoning.
Bisulphide of Carbon Poisoning.
Brass Poisoning.
Carbon Monoxide Poisoning.
Compressed-air Illness.
Dinitrobenzine Poisoning.
Lead Poisoning.
Mercury Poisoning.
Naphtha Poisoning.
Natural Gas Poisoning.
Phosphorus Poisoning.
Turpentine Poisoning.
Wood Alcohol Poisoning.

Any other disease or disability contracted as a result of the nature of the person's employment.

DISEASES OF UNKNOWN ORIGIN.

Cancer.
Pellagra.

What the Rural Resident of Ohio Needs Most of All

is adequate health protection. He does not get such protection from an ill-paid, usually incompetent, township health officer. A reform of the State's health organization such as the Governor has recommended to the Legislature will put every rural resident under the jurisdiction of a full-time, well-trained health officer who can give

REAL PROTECTION FOR THE PUBLIC HEALTH